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Message from the Scientific Director

As 2006 begins and we make plans for a new year, I find myself reflecting on INMHA's activities of the past twelve months. Once again it was a very busy and productive year for INMHA, and we have been fortunate to have strong support from our many stakeholders and partners.

A major activity of the past year for all of CIHR has been the evaluation of CIHR's thirteen Institutes, and of CIHR as a whole. This process has engaged many researchers, CIHR staff, Institute Advisory Boards, stakeholders, and contractor EKOS Research Associates. Reports are now close to completion and will be evaluated by an international review panel of 14 experts chaired by Dr. John Bell of Oxford University. The panel will visit CIHR on February 13th and 14th, and a final report is expected in June 2006.

The international panel will provide advice on how effectively CIHR is delivering on its vision, as outlined in the CIHR Act, and whether the thirteen Institutes are functioning well with their current mandates. Needless to say, INMHA has taken the evaluation process very seriously! Our Performance Evaluation & Budget Focus Group, ably led by retired IAB member Peter Scholefield and INMHA Assistant Director Richard Brière, has worked hard to produce a comprehensive report on INMHA activities to feed into the evaluation process.

We will study the reports carefully and use them in our ongoing efforts to continuously to improve our performance as an Institute. The results will also be critical for our strategic planning for 2006-2011.

There have of course been other accomplishments during the past year. Our annual meeting, always an important networking opportunity, was once again a success. The work of Senator Michael Kirby and the Standing Senate Committee on Social Affairs, Science and Technology continues to engage the mental health community and we look forward to the final report in March 2006. New international research collaborations have been established with China, Finland, and the US National Institutes of Health. A new International Partnership for Mental Health Research has been set up to increase research funding for psychiatric disorders and to facilitate information and resource sharing. A new RFA on Mental Health in the Workplace, launched in June, will deliver action-oriented intervention and policy research, while an international competition for a Chair in Neuroethics will increase capacity in this important area. The Regenerative Medicine and Nanomedicine program continues to attract strong interest from the research community and recently received a \$2 million cash infusion from CIHR central.

None of INMHA's accomplishments would be possible without our strong community of stakeholders - partners and friends from government, industry and the not-for-profit sectors, and a very strong and hard-working research community. Thank you all from the bottom of my heart.

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Tribute to Marlene Reimer

(Dr. Marlene Reimer, Dean of Nursing at the University of Manitoba and INMHA IAB member, died on November 1st 2005. The following tribute from Rémi Quirion is re-printed from the INMHA website)

It is with great sadness that I heard about the passing of my dear friend, colleague and Institute Advisory Board Member, Dr. Marlene Reimer, Dean, Faculty of Nursing, University of Manitoba.

I have known Marlene for almost five years.

I invited her in the winter of 2001 to join the advisory board of the newly created Institute of Neurosciences, Mental Health and Addiction of the Canadian Institutes of Health Research. In choosing her as one of the 15 inaugural board members (over 200 nominees), I was most impressed by her *Vitae* and commitment to innovative nursing research.

What I had read on paper was only a small reflection of Marlene's commitments and eagerness to promote research, not only among her peers, but on all aspects covered by the broad mandate of the Institute of Neurosciences, Mental Health and Addiction. Marlene was a key member of my IAB and was particularly involved in programs related to the training of the next generation of researchers and in knowledge translation and best clinical practices. I had asked her to chair our focus group on training and education and she did a wonderful job promoting our young trainees with a program known as "Brain Star". She is now one of them!

I have learned a lot from Marlene. Her humanistic approach to all aspects of life greatly impressed me and has left an indelible mark on the way I now do things. I already miss her very dearly. All of us at INMHA and particularly I have lost not only a mentor and a colleague but more importantly a dear friend and can even say a family member in her capacity as founding member of our Institute Advisory Board. My most sincere sympathy to her family, friends, and colleagues at the University of Manitoba and University of Calgary.

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Current Funding Opportunities

Regenerative Medicine and Nanomedicine Initiative (RMNI)

New Discoveries: High Risk Seed Grants registration deadline is April 3rd 2006.

INMHA Priority Announcement

INMHA will support a small number of highly-ranked applications to the March 2006 open operating grants competition. For details and information on how to apply, please follow [this link](#).

China-Canada Joint Health Research Program

A new program jointly managed and funded by the Canadian Institutes of Health Research (CIHR) and the National Natural Science Foundation of China (NSFC) was announced in December 2005. INMHA is one of six participating CIHR Institutes. The program's aim is to promote the development of Canadian-Chinese scientific co-operation between universities, hospitals, research institutes or affiliated research organizations in Canada and China through the support of collaborative research grants. The deadline for registration for the first competition for this program is March 1st 2006. For details please follow [this link](#).

Chair in Neuroethics

A Request for Applications (RFA) announcing an opportunity for applications for a Chair in Neuroethics was announced on December 2005. Visit the [web site](#) for further information.

Social Neuroscience - Joint RFA with NIH (RFA-DA-06-004)


This recently announced new RFA is a partnership between three NIH institutes (the National Institute on Drug Abuse, National Institute on Alcohol Abuse and Alcoholism and the National Institute on Aging) and the CIHR Institute of Neurosciences, Mental Health and Addiction.

Applications submitted to this RFA should focus on cognitive/behavioural processes and neurological mechanisms of social behaviour relevant to alcohol and drug abuse and decision making and judgment over the life course. Both clinical and preclinical research will be supported in this RFA and applicants are encouraged to take a multidisciplinary and multilevel approach in their submissions. For more information on this RFA please visit the web site.

Epigenetics of Neurobiology and Addiction - Joint RFA with NIH (RFA-DA-06-007)

This recently announced new RFA is a partnership between the NIH Institute on Drug Abuse (NIDA) and the CIHR Institute of Neurosciences, Mental Health and Addiction (INMHA).

The goal of this RFA is to solicit applications that will link epigenetic changes to other biological changes from the level of gene expression to behaviour, or allow investigators to gather preliminary data on epigenetic mechanism related to addiction. For more information on this RFA please visit the web site.

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Program Updates**Regenerative Medicine and Nanomedicine Initiative (RMNI)**

Full results from the 2004 RFA will be available shortly. The deadline date for Team Grant Letters of Intent (LOIs) for the 2005 RFA has recently passed, with 31 LOIs received. Results of the 2005 Team Grant LOI review will be available in February, 2006. The RMNI is pleased to announce the addition of Foundation Fighting Blindness as a partner on the 2005 Team Grant RFA. The 2005 RFA is still open for New Discoveries: High-Risk Seed grants, with registrations due by April 1, 2006.

The fourth annual Nanomedicine workshop will be held in conjunction with the third annual Nanoforum meeting at the University of Alberta/NRC National Institute for Nanotechnology (NINT) in June, 2006. Additional details will be available shortly. A new website for the RMNI has recently been developed, and is available online. Please visit the new website for all initiative updates. For further information, please contact Dr. Eric Marcotte, Associate Director of the RMNI (emarcotte@cihr-irsc.gc.ca).

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Meetings and Events**4th Annual INMHA Meeting**

The fourth Annual Meeting was held in Vancouver on Friday October 14th and Saturday October 15th. The meeting followed the successful format used in previous years - a focus on three major scientific topics, with perspectives from patients, NGOs and researchers including Brain Star awardees. The three topics for this meeting, representing areas of strength in the host city, Vancouver, were bipolar disorder, Parkinson's Disease, and addictions.

The panel on bipolar disorder was organized and chaired by Dr. Lakshmi Yatham, Professor in Psychiatry at UBC. Bipolar disorder is the 5th leading cause of disability among young adults worldwide. Effective drug therapy is difficult because drugs target one aspect of the disorder and not the other. Co-morbid conditions such as alcohol or drug addiction, psychoses, and suicidal tendencies are common.

Panel participants were consumer Sophia Van Norden, who gave a moving personal perspective on the

disorder and its impact on her life; INMHA IAB member Phil Upshall, who spoke on the role of the consumer, family and NGO in helping individuals with bipolar disorder; Dr. Alasdair Barr from the Department of Psychiatry at UBC, who spoke on animal models and their role in understanding the underlying neurobiology and in developing new treatments; and Dr. Yatham, who described studies with a birth cohort. Dr. Jon Stoessl, Director of the Pacific Parkinson's Foundation at UBC, chaired the Parkinson's Disease panel. More than 100,000 Canadians suffer from Parkinson's Disease. Canada has a rich tradition of basic research in PD, but there is still much to learn about the biochemistry, genetic and environmental causes, and treatment.

Marg Meikle opened the session with a presentation on the consumer's perspective. Dr. Stoessl followed with a discussion of the biology and associated co-morbid conditions such as depression, dyskinesia, and substance abuse. Doctoral student Sarah Lidstone described her research on the placebo effect in Parkinson's Disease. And finally, Diane Robinson, Executive Director of the Parkinson's Society of BC spoke about the perspective from the voluntary health sector and the work of the Parkinson's Society in research, education, outreach, advocacy and public awareness.

The Addictions panel was chaired by Dr. Martin Schechter, lead investigator on the NAOMI (North American Opiate Medication Initiative) clinical trial. Heroin addiction afflicts 60,000 to 90,000 Canadians leading to risk of lethal overdose, deadly infections such as HIV and hepatitis C, loss of social functioning and drug-related violence and crime. The cost to society is high and available treatments such as methadone do not work for all addicts. Treatment with controlled doses of heroin has been shown to be effective in some settings, but its effectiveness has not yet been assessed in Canada. That is what the NAOMI study aims to achieve.

Corrine Arthur gave a powerful presentation on the effect of heroin addiction on families and consumers. Dr. David Marsh gave a history of other international studies, and the background and methodological details of the current study. Bohdan Nosyk talked about the health economics aspects of the trial.

Dinner on Friday night featured a presentation of several important awards. Phil Upshall and the Mood Disorders Society of Canada received the 2005 Partnership Award in recognition of their very strong advocacy for mental health research over the last 4 years. Sean Mulligan, a doctoral student at the University of Calgary, was presented with the Brain Star of the Year award for his research published in *Nature* in 2004. Outgoing Institute Advisory Board members Lisa McKerracher, Mike Salter, Phil Upshall and Roberta Palmour were honoured for their outstanding contributions to the Institute.

The Brain Star session featured excellent presentations by four recent award winners. Jason Wilson described his work on measurement of neurodegeneration in ALS and Parkinson's Disease using magnetic resonance imaging. Morgan Wilson talked about the effects of dextroamphetamine on regional brain activity during cognitive tasks, using functional magnetic resonance imaging (fMRI) as a measurement tool. Tonia Nicholls described her work on violence risk assessment using clinical, actuarial and structured professional judgment approaches. Sean Mulligan, described the use of a cutting edge laser tool to discover that localized release of calcium within astrocytes can cause blood vessel constriction within the brain.

One afternoon of the meeting was devoted to a Partners' Forum, to provide an opportunity for nonprofit organizations and professional associations to dialogue with colleagues and researchers. The Forum included a very informative session on knowledge translation. Flora Dell, who heads the Institute of Musculoskeletal Health and Arthritis (IMHA) Knowledge Exchange Task Force, and Peter Levesque, Knowledge Exchange Specialist at the Centre of Excellence for Child and Youth Mental Health, described their work in this area. Both speakers highlighted the importance and significance of the voluntary sector's role in knowledge translation. Many excellent suggestions and recommendations emerged from this session. Most significantly, we must identify the relevance of translating research information to the health charities and professional associations, and make it very simple (i.e. what is the researcher doing, and how will the patient/consumer/client benefit?).

In addition, Dr. Rémi Quirion and his INMHA team discussed INMHA priorities for the coming months and years, and continuously emphasized the significant contributions made by the voluntary sector and professional associations in moving the INMHA priorities forward.

Translational Neuroscience Think Tank: Facilitating the Development of Therapeutics for Mental Illness

This meeting, led by George Robertson of Dalhousie University and sponsored by INMHA and the CIHR/Rx&D Research Program, was held in Vancouver on Oct. 28th and 29th 2005. It brought together international

leaders in the field of translational neuroscience research from both the academic and industrial sectors to identify ways in which CIHR might facilitate the development of diagnostic and therapeutics for the treatment of mental illnesses.

Participants identified strengths in Canadian clinical neuroscience research that would best capitalize on opportunities for therapeutic development in three areas.

Technologies and Resources to Improve Therapeutic Development

- Research on the blood brain barrier
- Development of inducible and brain specific knockout mice for CNS targets such as G-protein coupled receptors (GPCRs) and ion channels that have potential as tractable therapeutic targets.
- Create opportunities for training and career development in medicinal chemistry. More skilled personnel are needed to apply knowledge in chemistry to the field of neuropsychiatric research.
- Network CNS imaging centers to efficiently address fundamental issues in brain science and to assess capacity in this area. There is tremendous potential for improved diagnostic techniques of psychiatric illness based on recent advances in the ability to visualize the brain.

Pre-clinical research

- Establish a national network initiative in the field of neuroinflammation. Dysfunction of the immune system is now recognized as a fundamental pathological process in many neurological diseases.
- Create a research initiative (RFA) for the generation of new models for CNS diseases (e.g. modeling the complex genetic basis of schizophrenia).
- Develop an initiative for the training of systems neuroscientists and the study of integrative biology related to neuropsychiatric illnesses.

Clinical research

- Create a national consortium or Center of Excellence for Experimental Medicine in Clinical Neuroscience to centralize and optimize the development of therapeutics, taking advantage of well characterized patient populations and databases available as a result of our socialized medicine system.
- Develop an initiative for the identification of novel biomarkers for CNS diseases. This will result in improved diagnosis of neuropsychiatric illness and development of new therapeutics.
- Improve classification of neurological conditions using a combined approach of clinical classification (drug responsiveness) brain imaging, and biomarkers (genomics and proteomics).

Society for Neuroscience (SfN) Annual Meeting

This year's meeting was held in Washington from November 12th-16th, with about 35,000 attendees from all over the world. Once again INMHA had a booth, shared this year by CIHR's Institute of Aging, Institute of Genetics, and Institute of Human Development, Child and Youth Health. We had hundreds of visitors at the booth, students, researchers, and representatives of companies and not-for-profit organizations from Canada and many other countries. There was great interest in INMHA's Brain Star awards, in training opportunities, and in the strategic initiatives of all four Institutes. Many postdoctoral fellows were looking down the road for job opportunities in Canada.

SfN Canadian Neuroscience Showcase: The Journey Inside

Canada's neuroscience research excellence and international partnerships were the focus at a Canadian Neuroscience Showcase hosted by the Canadian Embassy, one of a series of country-specific receptions held during the SfN Annual Meeting this year. The organization of this very popular and successful event was a collaborative effort between INMHA, the Canadian Association for Neuroscience (CAN) and the Embassy. Financial support was provided by the National Research Council of Canada and the Canadian Space Agency. The most important contributors, however, were our two speakers whose presentations received rave reviews: Dr. Dave Williams and Dr. Michael Meaney.

Dr. Williams, a physician turned astronaut, has been with the Canadian Space Agency since the 1990s. His presentation focused on Neurolab (STS-90) and the scientific experiments conducted aboard the Columbia

Space Shuttle. Neurolab was a major scientific achievement that built upon previous Space Shuttle research missions. The mission celebrated the Decade of the Brain with international experiments from a wide range of neuroscience disciplines. A number of these represented historic "firsts" in space life science research resulting in scientific data that will have far reaching implications in future neuroscience research. Educational outreach activities were as impressive as the scientific productivity of the mission captivating the minds of both the young and old.

McGill University's Dr. Michael Meaney, who gave the SfN Presidential Lecture at last year's Annual Meeting, talked about "Maternal Care and Reactivity to Stress" (nature vs. nurture). Dr. Meaney described how variations in maternal care can result in sustained alterations in gene expression in offspring resulting from chemical changes to the DNA. The changes affected the area of the brain responsible for stress response in the adult rats. Dr. Meaney's research demonstrates that an individual's fate is not just sealed by genetic inheritance but by how the genes are sculpted by their environment.

Despite many other competing SfN events, we counted over 160 Canadian and international guests including Dr. Carol Barnes, President of SfN. Canadian attendees included senior neuroscientists, as well as trainees and Brain Star Awardees. Highlighting the importance of partnership, the guest list also included representatives of national and international funding and professional organizations and US and Canadian NGOs, and three other CIHR Institutes.

The varied guest list made the reception which followed the presentations a celebration of partnership and international collaboration, highlighting INMHA's work in these areas and the Embassy's role in bringing attention to Canada's world-class science. For INMHA, the event is a proud accomplishment and we look forward to 2008 when the SfN Meeting is back in Washington.

International Meeting on Neuroethics

Scientific progress in brain science brings some serious ethical, social and moral concerns which have spawned the field of neuroethics. INMHA has launched and participated in several Requests for Applications in this area. More recently, INMHA has been leading the development of an International Network in Neuroethics. As part of this effort, an international meeting of researchers, funding organizations and other organizations with an interest in this area was hosted by INMHA during the SfN meeting in Washington in November. The objective of the meeting was to develop linkages and to begin working toward an international research agenda.

The meeting was co-chaired by Rémi Quirion and Judy Illes, a neuroethicist and member of the INMHA's Institute Advisory Board. Organizations represented included MRC UK (Chief Executive Colin Blakemore), Brain Riken Institute, Japan (Takeo Hensch), University of Lausanne, Switzerland (Pierre Magistretti), Rita Levi Montalcini Center for Brain Repair, Italy (Piergiorgio Strata), National Institute of Drug Abuse (NIDA), National Institute of Mental Health (NIMH), National Institute of Alcohol Abuse and Alcoholism (NIAAA), the Dana Foundation, Swedish Research Council and the German Federal Ministry of Education and Research. The Canadian research community was represented by Jocelyn Downie and Francoise Baylis of Dalhousie University.

The meeting included an overview of the field and current activities and interests by the participating organizations and information on upcoming meetings and initiatives, including the new INMHA Chair in Neuroethics (see Funding Opportunities). Possible future initiatives discussed included an international workshop and special sessions at disciplinary meetings in psychiatry and neurology, at the 2006 SfN meeting or the 2007 IBRO World Congress. For further information, please contact Astrid Eberhart at aerberhart@cihr-irsc.gc.ca.

IBRO School in Argentina

Canadian Faculty Members including Drs. Kerry Delaney, Gerald Zamponi, John MacDonald and Lu-Yang Wang have completed our teaching at the IBRO/INMHA Advanced School of Neuroscience in Argentina. Each of them gave three lectures for twenty-four students from Latin America countries on a variety of topics ranging from molecular biology of ion channels to neurological diseases and disorders.


The lecture program was extremely intense, running from 8:30 am to 8:30 pm for the first four days (Nov. 19-

23). This was followed by half-day lectures and half-day work in a number of labs where students were doing electrophysiology experiments with brain slices, chromaffin cells, hair cells, oocytes and imaging experiments with neuromuscular junctions until Nov. 28.

Overall, this school was a huge success, in that we had not only introduced many important scientific topics to young, bright students from Latin America, but also learned a great deal from the lectures given by other faculty members at the school. Students asked very good questions and actively participated in discussions during and after lectures. Local neuroscientists are doing excellent work and have demonstrated a remarkable commitment to neuroscience research and development in Argentina. The success of this school indicates a bright future for neuroscience in Argentina and other countries in Latin America, if given appropriate support, particularly from international neuroscience community.

Canadian faculty members have done a wonderful job in presenting the very best neuroscience that Canada has to offer, and demonstrated tremendous commitment to excellent teaching and scholarship. I am very proud of being able to lead this delegation for the venture, and in my opinion, interactions with neuroscientists and students in Latin America may have a long-term impact for the well-being of neuroscience there and for potential recruitment of brightest minds to Canada. I would like to strongly advocate for a continuation of funding support for future schools like this one.

Thanks to Lu-Yang Wang for this report.

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Features and News

INMHA Institute Advisory Board profile: Mary Jardine

A seasoned health and volunteer services administrator with a Masters Degree in Health Services Administration, Mary has served in leadership positions within the voluntary/healthcare sector across Canada for over twenty years. She looks forward to assuming the position of Chief Executive Officer for the Schizophrenia Society of Canada in January, 2006. In this role, Mary will utilize her broad-based knowledge and skills in all nonprofit sector leadership categories to further the Society's mandate for research, advocacy, education and awareness, and fund development. She has just finished two years as Manager for the Toronto Region of The Canadian National Institute for the Blind. Prior to this role, Mary worked for over three years as National Executive Director for Parkinson Society Canada, and for four years in a senior position with the B.C. and Yukon Division of the Canadian Cancer Society. In addition, for over ten years, she was Director of Volunteer Services in two large hospital settings in Calgary and Vancouver.

Volunteerism and making a difference in people's lives have always been important elements in Mary's life. She currently serves on the National Board for The Make-A-Wish Foundation of Canada. Mary brings to the INMHA Advisory Board, as well, a comprehensive and personal perspective to advocacy and research in suicide and broader mental health issues. She chairs the INMHA Nongovernmental Organization and Professional Association Focus Group.

The following quote from management guru Joel Barker sums up Mary's philosophy:

*"Vision without action is merely a dream;
Action without vision simply passes the time;
Vision and action can change the world!"*

Partnering with the Non-Profit Sector and Professional Associations: It's a Win-Win for Everyone!

By Mary Jardine

There is an enormous role for the nonprofit/non-governmental sector and professional associations to play in moving the INMHA agenda forward. Some pertinent facts:

- There are over 161,000 non-profit organizations in Canada, of which more than 85,000 are registered

charities

- Over 5,300 of these have missions relating to the health of Canadians
- In 2003, 83% of the public supported increased public sector funding for health research
- In the voluntary sector, there is, on average, 25% staff turnover annually and that volunteer fatigue has led to a million fewer volunteers than 10 years ago
- The voluntary sector raises almost \$400 million each year to invest in health research and development
- 85% of donations in the voluntary sector are given by individual Canadians, not corporations or foundations
- Donors want to be reassured that their donations are being directed in a responsible manner and creative manner that advances NGO missions, with partners and without duplication of effort.

Not-for-profit organizations, large and small, represent hundreds of thousands individuals and families who will benefit from the outstanding research that comes out of our Institute. Together, with our researchers, we can create more leverage for research that will result in increased investment by the charitable sector. Everyone wins.

The partnership between INMHA and the nonprofit sector is a vital one. We raise funds that allow researchers to do their work. Our researchers represent the potential and the promise that allows those whom we serve to hold out varying degrees of hope for that elusive, but inevitable cure and an enhanced quality of life.

(Sources for statistics include 2004 National Survey of Nonprofit and Voluntary Organizations, 2003 Health Care in Canada Survey, and Statistics Canada, Service Bulletin. With thanks to Sharon Colle from the Foundation Fighting Blindness.)

Brian Mishara Elected President of the International Association for Suicide Prevention

Dr. Brian Mishara, Psychology Professor and Director of the Centre for Research and Intervention on Suicide and Euthanasia at the University of Quebec at Montreal was recently elected President of the International Association for Suicide Prevention (IASP) for 2005-2007. Dr. Mishara and his research centre, CRISE, have received CIHR funding for their Community Alliances for Health Research (CAHR) and Strategic Training Initiative in Health Research (STIHR) programs on suicide prevention.

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